

What is claimed is:

1. (original) A device for locating metallic objects, with at least one transmit coil (116) and at least one receive turn system (112, 114; 212, 214), which are inductively coupled to one another, wherein electrical switching means (1,..., 8; 1'a, 2'a, 3'a, 1'b, 2'b, 3'b) are provided, which make it possible to vary the effective number of turns of the at least one receive turn system (112, 114; 212, 214).
2. (original) The device as recited in Claim 1, wherein the effective number of turns of the at least one receive coil (112, 114; 212, 214) is variable by connecting or disconnecting electrical conductor modules.
3. (original) The device as recited in Claim 1, wherein the switching means (1,..., 8; 1'a, 2'a, 3'a, 1'b, 2'b, 3'b) are located between turns (113, 213) of a first receive coil (112, 212) and turns (115, 215) of a second receive coil (114, 214).
4. (original) The device as recited in Claim 1, wherein jumpers (1', 2', 3') with switching means (1'a, 2'a, 3'a, 1'b, 2'b, 3'b) are located between receive coil turns (213', 215') with a different radius R_a or R_b .
5. (currently amended) The device as recited in ~~Claim 1 or 3~~ Claim 1, wherein the switching means (1,...,8) or jumpers (1', 2', 3') are realized using solder bridges.
6. (currently amended) The device as recited in ~~Claim 1 or 3~~ Claim 1, wherein

the switching means (1,...,8; 1'a, 2'a, 3'a, 1'b, 2'b, 3'b) are realized using semiconductor components.

7. (original) The device as recited in Claim 1,

wherein

at least two receive coils (112, 114; 212, 214) are located coaxially relative to each other.

8. (original) The device as recited in Claim 1,

wherein

at least two receive coils (112, 114; 212, 214) are located in a plane.

9. (currently amended) The device as recited in Claim 5 [[or 6]],

wherein

at least two receive coils (112, 114; 212, 214) are designed as printed circuit coils, particularly on a printed circuit board.

10. (currently amended) The device as recited in Claim 6 ~~and 9~~,

wherein

the switching means (1,...,8; 1'a, 2'a, 3'a, 1'b, 2'b, 3'b) are realized using semiconductor switches on the printed circuit board.

11. (original) The device as recited in Claim 8,

wherein

at least one transmit coil (116) is located in a plane which is positioned with a height offset and is parallel to at least one receive coil.

12. (currently amended) The device as recited in Claim 9 ~~or 11~~,

wherein

at least one transmit coil (116) is installed on a bobbin, which is attached to the printed circuit board.

13. (currently amended) A measuring device, in particular a hand-held

locating device, with a device as recited in ~~one or more of the Claims 1 through 42~~ Claim 1.

14. (currently amended) A tool device, in particular a drilling or chiseling tool, with a device as recited in ~~one or more of the Claims 1 through 44~~ Claim 1.

15. (original) A method for operating an inductive compensation sensor (110, 210), with at least one transmit coil (116) and at least one receive turn system (112, 114; 212, 214), with which the adjustment of a voltage U induced in a receive coil (112, 114; 212, 214) takes place by connecting an adjustment turn system (113, 115; 213', 215') to the turns (113, 115; 213, 215) of the receive turn system (112, 114; 212, 214), this adjustment turn system (113, 115; 213', 215') including one or more compensation modules (220, 222, 224).

16. (original) The method as recited in Claim 15, with which, for each compensation module (220, 222, 224), it is possible to switch between m different alternative configurations (1'a, 2'a, 3'a, 1'b, 2'b, 3'b) of the electrical contacting.

17. (currently amended) The method as recited in Claim 15 [[or 16]], wherein
the adjustment turn system (113, 115; 213', 215') is composed of at least n ($n=1 \dots N$) independent compensation modules KM_n (220, 222, 224), each having $m(n)$ ($m(n)=1 \dots M(n)$) different configurations, in which a voltage change $\Delta U_{n,m}$ is induced, with $\Delta U = (U(n,m) - U(n,m+1))$, in the receiving branch (212, 214) of the compensation sensor (210) by selectively switching between individual configurations m of a compensation module KM_n (220, 222, 224).

18. (original) The method as recited in Claim 17,
wherein
the compensation modules KM_n (220, 222, 224) are configured such that the voltage change $\Delta U_{n,m}$ differs from the voltage difference $\Delta U_{n-1,m}$, with $\Delta U_{n-1,m} = (U(n-1,m') - U(n-1,m'+1))$, of compensation module KM_{n-1} by the factor $M(n-1)$,

with an ordinal number n reduced by one.

19. (currently amended) The method as recited in Claim 17 [[or 18]],

wherein

binary coding with $M(n)=2$ is used for the compensation modules KM_n (220, 222, 224) of the adjustment turn system (113,115; 213', 215'), so that the relationship $\Delta U = (U(n,1) - U(n,2)) = 2*(U(n-1,1) - U(n-1,2))$ applies.